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AMSAT NEWS SERVICE
ANS-250

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

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SB SAT @ AMSAT $ANS-250.01
ANS-250 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 250.01
>From AMSAT HQ KENSINGTON, MD.
DATE September 7, 2014
To All RADIO AMATEURS
BID: $ANS-250.01

ISS Antenna Constructed by AMSAT Key Factor in Sea Rescue

Since 2010, the International Space Station has been equipped with a space-based Vessel ID System receiver that allows it to track ships at sea by way of a ship's Automatic Identification System (AIS) signal. Since then, the system aboard the ISS has been receiving as many as 400,000 ship position reports from more than 22,000 different ships every single day.

According to Horst Koenig, retired Head of ESA's ISS System Engineering Section, "We had very close cooperation with NASA and the Radio Amateur Satellite Corporation (AMSAT). The AIS antenna was provided to ESA by AMSAT, along with an additional antenna for the Amateur Radio on International Space Station (ARISS) group."

This is the story of how this experimental system was used in 2012

to rescue the sole surviving crewmember of a fishing vessel after it overturned in the North Atlantic during a storm.
http://tinyurl.com/ANS250-gCaptian

More on NASA's Vessel ID System experiment can be found
http://tinyurl.com/ANS250-VesselID

More on the AIS on ISS and Assembling the Experiment can be found at
http://tinyurl.com/ANS250-AISonISS

Congratulations to the ARISS hardware team that was responsible for the development of the ISS AIS antenna system!

[ANS Thanks gCaptain.com and the European Space Agency for the above information]

SSTV Active on ISS

The SSTV downlink from the Russian ARISS radio was active for several orbits Friday through Saturday. Reports from around the world were being exchanged on social media as well as on the AMSAT-BB. Signals were received on the 145.80 FM downlink frequency in PD 180 mode. Signal reports were strong. There is no word on how long the SSTV will be active. The APRS digipeater in the Columbus module continued to be in operation during the SSTV downlinks.

Many pictures have been posted to
http://spaceflightsoftware.com/ARISS_SSTV/index.php

[ANS Thanks AMSAT-BB and Twitter and Facebook for the above information]

BOD Ballots Must be Recieved by September 15

There is still time to vote but remember that Board of Directors ballots must be recieved at the AMSAT Office by 15 SEP 2014 in order to be counted. Your returned ballot should be sent promptly, and those from outside North American preferably by air mail or other expedited means.

Normally there would be 3 full Board seats open this year, plus 2 alternates. However, with the passing of Tony Monteiro, AA2TX (SK), there will be an additional full Board seat open to fill the remainder of his term. This means that the top three recipients of votes will have two-year terms, the fourth most vote recipient serving as full member for one year. The fifth and sixth highest vote recipients will serve as first and second Alternate, respectively. You may vote for up to 4 individuals.

Election of board members is both an obligation as well as an opportunity by our membership to help shape the future direction of AMSAT-NA. Please take the time to review the candidate statements that accompany the ballot and determine who you wish to see on the Board.

[ANS thanks the AMSAT Office for the above information]

Deadlines Approaching for the 2014 AMSAT-NA Symposium

It is only five weeks from the kickoff of this year's AMSAT-NA Space Symposium, planned for October 10-12 in Baltimore, Maryland, so please sign up soon!!

AMSAT is holding a block of rooms at a special $99 rate until September 17th. After that date, rooms may be available, but at a significantly higher regular rate.
Details on the Symposium and room registration may be found at www.amsat.org.

The submission deadline for papers to be included in the conference proceedings is September 15th.
Details for submission may be found at http://www.amsat.org/?page_id=1568.

The deadline for orders for the popular 2014 AMSAT Symposium commemorative shirts to be received is September 10th. These shirts must be ordered directly, and will not be available on the AMSAT Store or at the meeting. Details and a downloadable order form may be found at http://www.amsat.org/?page_id=2928.

We are getting some fantastic items for the auction to be held during the symposium. A sampling of items include: A John Glenn limited edition commemorative, donated by Marilyn Mix and Dave Taylor, a Yaesu 757, from the estate of Astronaut Ronald Parise, 2 unbuilt models of the Energia-Buran and Space Station Mir in their original packaging, donated by Eric Rosenberg, and some Russian cultural and items and books. If you have items to donate, please contact Frank Bauer, KA3HDO at ka3hdo(a)verizon.net. And don't forget to bring your checkbooks as all proceeds are tax deductible and go to a great cause!

[ANS thanks the AMSAT Office for the above information]

AMSAT AWARDS Update

AMSAT Director Contests and Awards, Bruce Paige, KK5DO announce recent AMSAT AWARD Recipients.

The following have entered into the Satellite Communicators Club for making their first satellite QSO.

Kelly Davis, KC3CGT
David Coutts, VE3KLX
Michael Parrott, N4MEP
Michael Jones, W6GYC
Richard Weil, KW0U

The following have earned their AMSAT Sexagesimal Award.

Paul Stoetzer, N8HM, #166

The following have earned their Robert W. Barbee Jr., W4AMI Award.

Hector Martinez, CO6CBF, #81 (Basic 1,000 plus endorsements through 4,000)
Paul Stoetzer, N8HM, #82

The following have earned their Robert W. Barbee Jr., W4AMI 5,000 Award.

Hector Martinez, CO6CBF, #31

To see all the awards visit http://www.amsat.org or http://www.amsatnet.com/awards.html

[ANS thanks Bruce, KK5DO, for the above information]

Submit Messages for Asteroid Mission Time Capsule

NASA is inviting the worldwide public to submit short messages and images on social media that could be placed in a time capsule aboard a spacecraft launching to an asteroid in 2016.

Called the Origins-Spectral Interpretation-Resource Identification-Security-Regolith Explorer (OSIRIS-REx), the spacecraft will rendezvous with the asteroid Bennu in 2019, collect a sample and return the cache in a capsule to Earth in 2023 for detailed study. The robotic mission will spend more than two years at the 1,760-foot (500-meter)-wide asteroid and return a minimum of 2 ounces (60 grams) of its surface material.

Topics for submissions by the public should be about solar system exploration in 2014 and predictions for space exploration activities in 2023. The mission team will choose 50 tweets and 50 images to be placed in the capsule. Messages can be submitted Sept. 2 - 30. The time capsule website will give you the instructions on how to particpate. See:
http://www.asteroidmission.org/timecapsule

When the sample return capsule returns to Earth in 2023 with the asteroid material, the mission team will open the time capsule to view the messages and images, at which time the selected submissions will be posted online.

[ANS thanks NASA and SpaceDaily.com for the above information]

AMSAT Symposium Auction

At this year's AMSAT Space Symposium, we are trying a few new things and we hope you will enjoy them. One exciting facet we are adding this year is an auction. All proceeds from the auction will support AMSAT's two major initiatives--the development and launch of the FOX satellite series and the ARISS program.

As we prepare for the auction, we are asking for your help in donating specialty items for auction (minimum value $100) that will attract symposium attendee's attention and get them bidding up the item price. If you have any items that are ham related (no boat anchors please), items of historical value, space related and/or autographed items, or even sports tickets or time shares, we would love to get your donations. Think out of the box on this--what exciting things would you like to see in this auction?

If you have something to donate to the Symposium auction, please send an e-mail to Frank Bauer, KA3HDO, who will work with you on getting your item or items into the auction. Frank's e-mail address is ka3hdo at verizon dot net

This auction, while adding a fun experience to the AMSAT Space Symposium experience, will also serve to keep amateur radio's spirit thriving in space through its donations to FOX and ARISS.

On behalf of AMSAT, I thank you for your donations in advance. And I encourage each of you to attend and participate in this year's AMSAT Space Symposium to be held in Baltimore Maryland Oct 10-12. For more information, see:
http://www.amsat.org/?page_id=1555

[ANS thanks Frank KA3DHO and Janet Bauer, Symposium Committee Co-Chairs, for the above information]

Western States Satellite DXpedition on the Road Now

John, K8YSE, has started on a grid expedition to some Western States. The grids that he will definitely operate from are: CN93, CN96, DN03, DN05, DN07, DN14, DN15, DN20, DN21, DN22, DN23, DN48, DN54, DN68, DN76, DN78, DM38, DM48 and DM49.

John states, "There will be many other grids on the route, but I'll only operate from them if the situation permits. This is a tent camping trip, and the weather will play a role in when and if I can operate. The first grid will be DN54 although there may be one or two before that depending on the timing."

John will be using an Icom 910H and an Arrow or Elk antenna rather than the setup in my truck that was used on the Lake Superior Expedition. Setup time and weather will be a factor. I don't anticipate operating in darkness although it may be possible at campsites. I will be using computer control on the linear birds.

We don't have many satellites now and since AO-7 is now switching between Mode A and B, it will only be available every other day. The primary birds will be FO-29 and SO-50. There may be some AO-73, but not likely. If AO-7 is weak, he may operate on CW on that bird only.

John will be track-able on APRS as K8YSE-9 (cellphone 3g/4g) and/or K8YSE-12, or -12 on RF. He also adds, "Sometime in October I will plan a short trip over to DM63/64 if anyone needs those grids. And on January 1st, 2015, I will operate at least one pass from FM13 in the afternoon."

John doesn't anticipate doing LoTW for this expedition. Cards should be sent direct to him. If you have many contacts to confirm, a log excerpt can be sent that he can sign and return to you. Please make

sure you indicate which grid he was in for each QSO. He also plans to record all passes and log on paper as well. QSOs will be confirmed sometime in December. To read
John's complete press release, go to:
http://amsat.org/pipermail/amsat-bb/2014-August/050548.html

[ANS thanks John Papays, K8YSE for the above information]

ARTSAT1: INVADER (CO-77) Decays

ARTSAT1: INVADER (CO-77) decayed earlier this week . It was only 186 days since launch. However, we are so glad that many hams listen and report it.

ARTSAT team is now concentrating the next project, ARTSAT2: DESPATCH as announced by JI1IZR last night.

We are continuously going to develop our concept and philosophy through the creation of artworks using the data from INVADER and launch of next deep-space amateur spacecrafts, DESPATCH. We would be grateful for your continued cooperation.

[ANS thanks Akihiro Kubota, ARTSAT Project for the above information]

ARISS News

+ A Successful contact was made between About Gagarin From Space, The Center Of Supplementary Education For Children Of Ruzayev District Mordovia Republic Russia and Cosmonaut Oleg Artemyev using callsign RSØISS. The contact began 2014-08-30 10:00 UTC and lasted about nine and a half minutes. Contact was direct via R4UAB.
ARISS Mentor was RV3DR.
The Russian web site http://r4uab.ru/?page_id=6368 includes pictures, video, and descriptions of the contact and student activities.

+ A Successful contact was made between Gymnasium Siegburg Alleestraße Siegburg, Germany and Astronaut Alexander Gerst KF5ONO using callsign DPØISS. The contact began 2014-09-01 13:12 UTC and lasted about nine and a half minutes. Contact was direct via DN6KW.
ARISS Mentor was IN3GHZ.
600 were present in the audience, including students, parents, VIP's, members of the DLR team, University of Bonn and the German National Amateur Radio Society. The German nationwide TV stations ARD, WDR, RPR and some regional newspapers covered the event.

+ A Successful contact was made between Evansville Day School Evansville, Indiana USA and Astronaut Gregory Wiseman KF5LKT using callsign NA1SS. The contact began 2014-09-03 14:31 UTC and lasted about nine and a half minutes. Contact was direct via W9OG.
ARISS Mentor was K5YFL.
All 15 prepared questions plus two others were answered during the contact. For all their STEM efforts leading up to the ARISS contact, the mayor of Evansville declared Sept 3 as "Evansville Day School Science Day."

Upcoming ARISS Contact Schedule

St. Joan of Arc School, Lisle, IL, direct via K9LEZ
Contact is a go for: Mon 2014-09-08 18:34:45 UTC

St. Joan of Arc Catholic School is located in Lisle, Illinois, a western suburb of Chicago. We are a pre-K to 8th grade school with about 600 students. St. Joan provides an educational environment which grants each student access to the highest quality and richest variety of integrated educational experiences within our means. We are committed to preparing our students to think critically and become confident, sensitive, Christian leaders capable of adapting and contributing to their community. Our school was awarded the National Blue Ribbon Award for Academic Excellence in 2011. Our school was named an IMSA (Illinios Math and Science Academy) Fusion School in 2012. Our school participated in NASA's microgravity program through the Johnson Space Center in Houston, Texas in 2013. The teachers directly involves in this contact completed the American Radio Relay League's (ARRL) summer teacher institute program and are working with local radio amateurs to successfully complete this contact and to provide additional opportunities to our classrooms.

Students First Names & Questions:
1. Caitlin: Was it hard to sit so long in the Soyuz capsule on the way to the ISS?
2. Ben: Do you have any type of church services or a chance to receive communion on the ISS?
3. Marlo: What is your favorite thing you have seen on Earth from the space station?
4. Mary: What type of research are you doing on the ISS?
5. Olivia: What made you want to become an astronaut?
6. Nicholas: What is your favorite thing to eat in space?
7. Merrick: How do you talk to your family and friends?
8. Charlotte: What happens if you get sick?
9. Amelia: Is it hard to sleep in space?
10. Taylor: What do you miss most about home?
11. Ava: What do you like to do in your free time?
12. Brady: What is the scariest thing you have experienced as an astronaut?
13. Nathan: What type of exercises do you do while in space?
14. Jake: What was your favorite subject while in school?
15. Kristine: What was the hardest part of astronaut training?
16. Phil: What is the most interesting object in the universe that you have seen from the ISS?
17. Miss Friedman: What advice would you give to a student who would like to someday become an astronaut?
18. Mrs. Anderson: What do you miss most about gravity?
19. Mrs. Anderson: What is the greatest challenge of living with people from other countries?
20. Miss Friedman: What do you enjoy most about being weightless?

Lanier Middle School and Lanier Cluster Schools, Sugar Hill, GA, direct via W4GR
Contact is a go for: Tue 2014-09-09 11:16:25 UTC

Lanier Cluster is the home of the Longhorns! They are a group of schools with a common goal: Learn, Lead, Succeed. They are comprised of one special needs preschool (The Buice School), three elementary schools (Sugar Hill Elementary, Sycamore Elementary, White Oak Elementary), one middle school (Lanier Middle), and one high school (Lanier High). Their schools are located in the greater Atlanta metro area in the largest school district in Georgia. Their schools and cluster are named after nearby Lake Lanier, which part of the Chattahoochee River system.

Lanier Cluster schools strive to create authentic learning environments for our students. Towards that end, our elementary schools, Lanier Middle, and Lanier High have project based learning programs for students. At Lanier High, students choose to be a part of a school within a school (academy model) as they guide students towards career and college readiness. Lanier High was also recently certified as a Georgia STEM high school, the only all-inclusive, traditional high school in Georgia that has received this STEM certification.

Lanier Cluster students are excited about science and space exploration. They have participated in regional and state science fairs, designed an experiment flown in microgravity, and chatted with a NASA Earth scientist live on NASA TV. They have presented at conferences, participated in robotics and app challenge events, and even won an Emmy for work on a 3D computer animation for a PBS documentary. The students of Lanier Cluster are excited to be a part of this ARISS contact!

Students First Names & Questions:

1. Marcus (12th grade) What was your motivation to becoming an astronaut?
2. Joseph (5th grade) If you were repairing the space station outside and the tether snapped, what would you do?
3. James (11th grade) Your whole life led up to this moment. You've gotten great grades through school and endured all the training that allowed you to go into space. Do you think it is all worth doing? Does it all payoff in this moment?
4. Bianca (5th grade) Do you do cool experiments?
5. Wyatt (3rd grade) What do you like best about space?
6. Red Lady Bug Class (PreK 4) Can you dance in space?
7. Reyes (4th grade) In our school we have an Inquiry Program, which is a collaborative program. As you work with other countries in space what challenges do you have as you collaborate with them.
8. America (3rd grade) How much do you weight when you wear your spacesuit on Earth?
9. Mason (5th grade) Does it get really hot when you re-enter Earth's atmosphere?
10. Zae-kwon (10th grade) Thinking of how long it took humans to go to the moon and how humans have not stepped foot on some of the other planets, how long do you think it will take to reach the nearest star system?
11. Green Frog Class (PreK 4) Will the spaceship crash into meteors?
12. Jahzay (5th grade) What exactly is your job at the space station?
13. Ormand (12th grade) What's the most annoying thing about zero gravity?
14. Charlie (5th grade) Have you come across any challenges yet?
15. Lily (5th grade) How do you sleep in space without floating around?
16. Brown Bear Class (PreK 4) How long is space training?
17. Savannah (4th grade) Once you have landed back on Earth, how do you make adjustments to being back on Earth and no longer in space (gravity, sleeping, eating, etc.)
18. Sherlyn (3rd grade) How many astronauts are there in space?
19. Kasandra (5th grade) Is (are) there food or restrooms in space?
20. Blue Butterfly Class (PreK 4) How do you eat food without it floating away?

The ARISS team mourns the loss of Astronaut Steve Nagel, callsign N5RAW, who passed away on August 21. Steve supported amateur radio school contacts on two of his Shuttle flights as part of the SAREX (Shuttle Amateur Radio EXperiment) program, the forerunner to ARISS.

Article from last week's ARISS Contact at Dorothy Grant Elementary in Fontana, CA: http://TinyURL.com/ANS250-DorothyGrant

Here is the video that was put together by the Peoria Unified School District for the Zuni Hills Contact. Enjoy!
http://youtu.be/cQpAlsBE2IE

[ANS thanks ARISS, Charlie AJ9N, David AA4KN, Frank KA3DHO and Keith W5IU for the above information]

Satellite Shorts From All Over

The CubeSat Chasqui-1 features on page 44 of the September issue of the free publication Sat Magazine
http://www.satmagazine.com/download.php#

Abyss-2 - from the Japanese language article it looks like it's carrying an amateur radio payload and will launch this December. Does anyone have any further information ?
http://tinyurl.com/ANS250-Asteroid

Also there appears to be a Japanese Lunar Orbiter under development which will carry an amateur radio transponder
http://kit-okuyama-lab.com/en/sinen2/sinen2-outline/

[ANS thanks Trevor M5AKA for the above information]

You Can Run But You Can't Hide

Tom Doyle W9KE reports on the AMSAT-BB about a serendipitous CW contact earlier this week.

On an early morning FO-29 pass I was doing some SDR desense tests. I was looking for an open spot to do the tests so as to not interfere with anyone. I send a bunch of dots or dashes to check the downlink signal on the SDR and identify myself with the call sign. There were some ssb contacts going on and some CW so I had to move from time to time. It seemed as if I was often in danger of interfering with a cw contact so I would have to move frequently. The sdr latency is an issue when trying to monitor your cw downlink. I heard my callsign on the downlink and thought that a two second latency delay was a bit much. I finally figured out that someone was calling me - it was the person that I had been trying to not interfere with by moving away from his frequency. It was K9CIS. He deserves an award for working someone who was not even trying to make a contact. He is a very skilled operator who had no trouble with the fact that I was operating without any Doppler correction and I had been jumping (not swooping) around trying to stay off his frequency for some time. Well done.

[ANS thanks Tom W9KE for the above information]

/EX

In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information.

73,
This week's ANS Editor,
EMike McCardel, KC8YLD
kc8yld at amsat dot org